UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,967	06/15/2006	Alessandro Capuzzello	09952.0057	9101

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ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/582,967	CAPUZZELLO ET AL.
Office Action Summary	Examiner	Art Unit	
	OMONIYI A. OBAYANJU	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *15 June 2006*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *21-40* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *21-40* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *15 June 2006* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. _____.
    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
       application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *06/15/2006*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 40 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 40 recites " a computer program product" which is not defined in the specification, and "a computer program product" that is not embodied in a functional descriptive material is neither a process ("actions"), machine, manufacture nor composition of matter (i.e., tangible "thing") and therefore does not fall within one of the four categories of § 101. 3. Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non- statutory, under the present USPTO Interim Guidelines, 1300 Official Gazette Patent and Trademark Office 142 (Nov. 22, 2005).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 21-28, 32, 37-40, are rejected under 35 U.S.C. 102(e) as being

anticipated by Garceran et al. (US Patent No. 6522888).

As to **claim 21**, Garceran teaches a method for locating a terminal in a local

wireless telecommunications network (abs) comprising a plurality of base stations (fig.1

#24a-g) that provide services on respective coverage areas (abs), adapted to provide a

location estimation of the terminal depending on a set of configuration data and on a set

of measuring data (col. 3, lines 15-25) indicating whether the terminal belongs to a

subset of said coverage areas and acquired from terminal or network (col. 3, lines 30-35

and lines 40-45), comprising: defining a set of configuration data comprising a plurality

of configuration data bases (col. 4, lines 40-45), each one having a respective weight

function (col. 4, lines 50-60); defining a set of measuring data comprising a plurality of

measuring types (col. 3, lines 35-45), depending on the type of terminal; associating,

through different combinations of configuration data bases and measuring types,

respective locating procedures that correspond to accuracy values of the location

estimation (col. 3, lines 45-50); and selectively actuating at least one locating procedure

obtained from said associating step (col. 4, line 63-67).

As to **claim 22**, Garceran teaches wherein said step of selectively actuating

comprises selecting a locating procedure depending on a set of available measuring

data (col. 4, line 63-67) and on a prefixed accuracy threshold value (col. 3, lines 55-60)

of the locating estimation, in such a way that said procedure has an accuracy value that

is not less than the prefixed threshold value (col. 12, lines 1-5), minimizing the weight

function of the configuration data base (col. 12, lines 1-5, reducing path loss).

As to **claim 23**, Garceran in teaches similar limitations as discussed in claim 21

above.

As to **claim 24**, Garceran teaches wherein said step of selectively actuating

comprises selecting a locating procedure (col. 4, line 63-67) depending on a set of

available measuring data and on a prefixed set of available configuration data (col. 3,

lines 15-25), in such a way that said procedure has the best response speed to the

location estimation request (col. 6, lines 40-45).

As to **claim 25**, Garceran teaches wherein said step of selectively actuating

comprises a step of selecting a locating procedure (col. 4, line 63-67) depending on a

set of available measuring data and on a prefixed set of available configuration data

(col. 3, lines 15-25), in such a way that said procedure has a pricing (rates) value in

compliance with a value predefined by the user (col. 3, lines 61-65).

As to **claim 26**, Garceran teaches wherein said set of configuration data

comprises at least one data base among a plurality of data bases related to: radio-

electric or performance parameters of signals transmitted from the base stations, in

predetermined space positions belonging to the coverage area of the network (col. 3,

line 10-25).

As to **claim 27**, Garceran teaches wherein said set of measuring data acquired

by terminal or network comprises at least one type of data among a plurality of types of

data related to: identification of the base station by which the terminal is served (col. 3, line 40-45).

As to **claim 28**, Garceran teaches comprising the temporary exclusion (different or change) of a set of configuration data from said plurality of configuration data base (col. 5, lines 64-67).

As to **claim 32**, Garceran teaches comprising the operation of creating and maintaining a data base for storing the time succession of estimated positions of a terminal (col. 4, lines 50-60).

As to **claim 37**, Garceran teaches A processing system (fig. 4, #78) for locating a terminal in a local wireless telecommunications network comprising a plurality of base stations (fig.1 #24a-g) that provide services on respective coverage areas (abs), adapted to provide a location estimation of the terminal, comprising: storage modules (fig. 2, #52) for storing data bases of configuration data, and of measuring data (col. 3, lines 15-25) types indicating whether the terminal belongs to a subset of said coverage areas and acquired from the terminal or the network (col. 3, lines 30-35 and lines 40-45); and a locating processing module (fig. 4, #78) adapted to associate, with different combinations of a data base of configurations and a measuring type, respective locating procedures corresponding to accuracy value of the location estimation (col. 3, lines 45-50), and to perform the procedure related to a selected combination (col. 3, line 45).

As to **claim 38**, Garceran teaches A local wireless telecommunications network, comprising a processing system for locating a network terminal (abs, lines 1-5).

As to **claim 39**, Garceran teaches a telecommunications network (abs)

As to **claim 40**, Garceran teaches a computer program product or group of

computer program products that can be executed by a processing system (fig. 4, #78),

comprising one or more code modules for performing a method for locating a terminal in

a local wireless telecommunications network (col. 15, lines 5-10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious at the
> time the invention was made to a person having ordinary skill in the art to which said subject matter
> pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 29, 30, and 31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Garceran et al. (US Patent No. 6522888) in view of Hussa (US

Publication No. 20040156372).

As to **claim 29**, Garceran teaches the limitations of claim 21 as discussed above.

However, Garceran fails to teach a preliminary transfer operation, on a terminal of the

network, of processing programs for performing at least one subset of locating

procedures (pg. 4, pp0038, lines 24-26), and of configuration data bases (base station

coordinates) used by the transferred locating procedures (pg. 4, pp0038, lines 6-9),

whereby the location estimation is performed by the terminal and information about

estimated position and estimation accuracy are transmitted from the terminal to a

locating system upon every service request.

But, Hussa teaches preliminary transfer operation, on a terminal of the network (mobile based positioning), on a terminal of the network, of processing programs for performing at least one subset of locating procedures (pg. 4, pp0038, lines 24-26), and of configuration data bases (base station coordinates) used by the transferred locating procedures (pg. 4, pp0038, lines 6-9), whereby the location estimation is performed by the terminal and information about estimated position and estimation accuracy are transmitted from the terminal to a locating system upon every service request (pg. 4, pp0038, lines 30-34).Thus it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the teachings of Garceran with the teachings of Hussa to achieve a communication device that can efficiently and accurately calculate the position of a wireless device in a communication network.

As to **claim 30**, Garceran teaches the limitations of claim 29 as discussed above. However, Garceran fails to teach wherein a synthesis or model of configuration data base is transferred.

But, configuration data bases (base station coordinates) transferred (downloaded) (pg. 4, pp0038, lines 6-9). Thus it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the teachings of Garceran with the teachings of Hussa to achieve a communication device that can efficiently and accurately calculate the position of a wireless device in a communication network.

As to **claim 31,** Garceran teaches locating accuracy and/or the applied pricing (rates, col. 6, lines 40-45).

However, Garceran fails to teach wherein the selection of the set locating procedures that can be performed by a terminal occurs depending on measures that the terminal.

But, Hussa teaches the terminal performing the signal measurement and calculates the location estimate (pg. 4, pp0038, lines 24-26). Thus it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the teachings of Garceran with the teachings of Hussa to achieve a communication device that can efficiently and accurately calculate the position of a wireless device in a communication network.

Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garceran et al. (US Patent No. 6522888) in view of Riley et al. (US Publication No. 20030125046).

As to **claim 33**, Garceran teaches the limitations of claim 21 as discussed above. Garceran further teaches wherein the locating procedure associated with the combination of a configuration data base related to locating coordinates of the base stations, and possibly the radio-electric characteristics of the network (col. 7, lines 60-65), and still possibly the structural/electromagnetic characteristics of the environment in which the network is deployed (col. 8, lines 5-10), with measures related to the identification of the base station by which the terminal is served (col. 4, lines 20-25).

However, Garceran fails to teach estimates the position of the terminal corresponding to the barycenter coordinates of the coverage area of said base station, the uncertainty being defined by the distances from said barycenter to all points of the area.

But, Riley teaches a position estimate of a mobile station based on the barycenter (centroid) of a coverage area, and the uncertainty measured in association with the barycenter to all points of the area (pg. 4, pp0041, lines 1-12). Thus it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the teachings of Garceran with the teachings of Riley to efficiently and accurately determine a precise point or position of a wireless device in a communication network.

As to **claim 34**, teaches the limitations of claim 33 as discussed above. Garceran further teaches wherein the locating procedure associated with the combination of a configuration data base related to locating coordinates of the base stations, and possibly the radio-electric characteristics of the network (col. 7, lines 60-65), and still possibly the structural/electromagnetic characteristics of the environment in which the network is deployed (col. 8, lines 5-10), with measures related to the identification of the base station by which the terminal is served (col. 4, lines 20-25) and the identifications of the base stations received by the terminal (col. 4, lines30-35), the terminal is served comprising the points nearer to the base stations received by the terminal with respect to unreceived base stations (neighboring base station) (col. 9, lines 35-44).

However, Garceran fails to teach estimates the position of the terminal corresponding to the barycenter coordinates of the coverage sub-area of said base

station, the uncertainty being defined by the distances from said barycenter to all points
of the area.

But, Riley teaches a position estimate of a mobile station based on the
barycenter (centroid) of a coverage area, and the uncertainty measured in association
with the barycenter to all points of the area (pg. 4, pp0041, lines 1-12). Thus it would
have been obvious to one of ordinary skill in the art at time the invention was made to
modify the teachings of Garceran with the teachings of Riley to efficiently and accurately
determine a precise point or position of a wireless device in a communication network.

As to **claim 35**, Garceran in view of Riley teaches similar limitations as discussed
in claim 34 above.

As to **claim 36**, Garceran teaches the limitations of claim 34 as discussed above.
Garceran further teaches wherein the locating procedure associated with the
combination of a configuration data base related to locating coordinates of the base
stations and possibly the radio-electric characteristics of the network (col. 7, lines 60-
65), and still possibly the structural/electromagnetic characteristics of the environment in
which the network is deployed (col. 8, lines 5-10), with measures related to the
identification of the base station by which the terminal is served (col. 4, lines 20-25), to
the identifications of base stations received by the terminal (col. 4, lines30-35), to at
least one radio-electric or performance parameter transmitted from said server base
station (col. 3, lines 35-45) and depending on the distance from said base station to the
terminal, and to at least one radio-electric or performance parameter of the signal
transmitted from received base stations and depending on the distance from said base

stations to the terminal, defined depending on the distances from said base stations to the terminal and estimated depending on said parameters (col. 7, lines 50-65).

However, Garceran fails to teach estimates the position of the terminal corresponding to the barycenter coordinates of the coverage sub-area of said base station, the uncertainty being defined by the distances from said barycenter to all points of the area.

But, Riley teaches a position estimate of a mobile station based on the barycenter (centroid) of a coverage area, and the uncertainty measured in association with the barycenter to all points of the area (pg. 4, pp0041, lines 1-12). Thus it would have been obvious to one of ordinary skill in the art at time the invention was made to modify the teachings of Garceran with the teachings of Riley to efficiently and accurately determine a precise point or position of a wireless device in a communication network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMONIYI A. OBAYANJU whose telephone number is (571)270-5885. The examiner can normally be reached on Mon - Fri, 7:30 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent P. Harper can be reached on 571-272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/O. A. O./   /VINCENT P. HARPER/
Examiner, Art Unit 2617   Supervisory Patent
                                              Examiner, Art Unit 2617